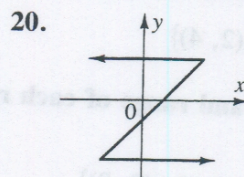
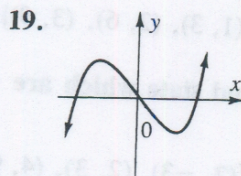
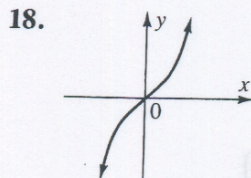
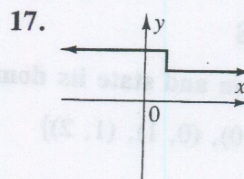
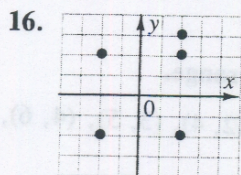
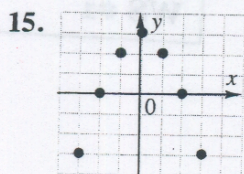


Use the vertical line test to determine which of the graphs are functions.



Write a rule for each relation and state its domain and range.

21. $\{(-2, -6), (-4, -12), (6, 18)\}$

22. $\{(1, -2), (2, -4), (-1, 2)\}$

23. $\{(-1, -1), (0, 1), (2, 5), (3, 7)\}$

24. $\{(2, 1), (1, -1), (-1, -5), (-2, -7)\}$

Make a mapping diagram for each relation and determine whether or not it is a function.

25. $\{(3, 5), (-7, 1), (2, 6), (4, 2)\}$

26. $\{(4, 6), (4, 7), (-2, -5), (3, -5)\}$

27. $\{(0, 1), (1, -3), (-2, -3), (3, -3)\}$

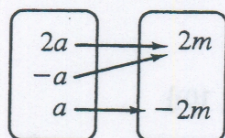
28. $\{(4, 0), (7, 0), (4, -1), (7, -1)\}$

Determine which, if any, of the following relations are functions.

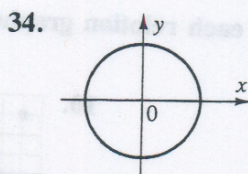
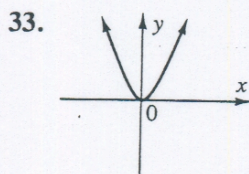
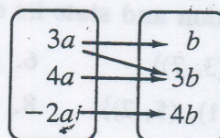
29. $\{(x, y): y = 0\}$

30. $\{(x, y): x = 2\}$

31. Domain Range



32. Domain Range



Write a rule for each relation.

35. $\{(-2, 2), (-1, 1), (0, 0), (1, 1), (2, 2)\}$

36. $\{(0, 0), (-1, 1), (1, 1), (-2, 4), (2, 4)\}$

37. $\{(0, 0), (-1, -1), (-2, -8), (-3, -27)\}$

38. $\{(-2, 8), (-1, 1), (0, 0), (1, 1), (2, 8)\}$

39. In the relation $\{(x, y): y = 3x + 4\}$, is y a function of x ?

40. In the relation $\{(x, y): x = y^2\}$, is y a function of x ?